

L6 ANSWER 5 OF 8 CA COPYRIGHT 2003 ACS  
 AN 132:205130 CA  
 TI Methods for generating doubled haploid plants from microspores  
 IN Konzak, Calvin F.; Polle, Enrique A.; Liu, Weiguo; Zheng, Yuanming  
 PA USA  
 SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000014202	A1	20000316	WO 1999-US19498	19990826
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2342983	AA	20000316	CA 1999-2342983	19990826
	AU 9956932	A1	20000327	AU 1999-56932	19990826
	EP 1112347	A1	20010704	EP 1999-943940	19990826
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9913534	A	20020702	BR 1999-13534	19990826
	WO 2001014518	A2	20010301	WO 2000-US18790	20000823
	WO 2001014518	A3	20011018		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 2000070518	A5	20010319	AU 2000-70518	20000823
	EP 1206524	A2	20020522	EP 2000-959147	20000823
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	US 2002104128	A1	20020801	US 2002-42932	20020108
PRAI	US 1998-99633P	P	19980909		
	US 1999-150761P	A2	19990826		
	US 1999-383588	A2	19990826		
	WO 1999-US19498	W	19990826		
	WO 2000-US18790	W	20000823		

AB The present invention provides methods for generating doubled haploid and/or haploid plants from microspores. In a presently preferred embodiment of the methods of the present invention, plant material is selected that bears reproductive organs contg. microspores at a developmental stage that is amenable to androgenic induction. The microspores are treated by contacting the selected plant material with water and subjecting the selected plant material to temp. stress, and optionally to nutrient stress. Preferably the selected plant material is contacted with an effective amt. of a sporophytic development inducer and an effective amt. of an auxin and/or cell spindle inhibiting agent. Optionally, the selected plant material is contacted with an effective amt. of a cytokinin and/or an effective amt. of a gibberellin. The treated microspores are isolated, preferably by d. centrifugation utilizing a soln. of 0.3 M mannitol layered over a higher d. soln. of a

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sugar, preferably maltose. The isolated, treated microspores are then cultured in a liq. nutrient suspension medium supplemented with at least one plant ovary or with an aliquot of plant ovary conditioned medium, until the microspores develop into embryoids. The embryoids are transferred to a regeneration medium and incubated therein until the embryoids develop into plants. The resulting plants may be haploid or doubled haploid and may also be genetically transformed. Doubled haploid wheat plants were generated from microspores.

- IC ICM C12N005-00
- ICS C12N015-05; C12N015-82; A01H001-08; A01H004-00; A01H005-00
- CC 9-11 (Biochemical Methods)
- Section cross-reference(s): 3, 11
- ST plant haploid microspore stress ovary culture; wheat haploid microspore plant culture medium
- IT Stress, plant
  - (cold; generating doubled haploid plants from microspores)
- IT Centrifugation
  - (d.-gradient; generating doubled haploid plants from microspores)
- IT Growth and development, plant
  - (embryogenesis; generating doubled haploid plants from microspores)
- IT Culture media
  - Embryo, plant
  - Transformation, genetic
    - (generating doubled haploid plants from microspores)
- IT Auxins
  - Cytokinins
  - Gibberellins
- RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
  - (generating doubled haploid plants from microspores)
- IT Plant (Embryophyta)
  - (haploid; generating doubled haploid plants from microspores)
- IT Stress, plant
  - (heat; generating doubled haploid plants from microspores)
- IT Pollen
  - (microspore; generating doubled haploid plants from microspores)
- IT Organelle
  - (mitotic spindle, inhibiting agent for; generating doubled haploid plants from microspores)
- IT Stress, plant
  - (nutrient; generating doubled haploid plants from microspores)
- IT Wheat
  - (ovary of; generating doubled haploid plants from microspores)
- IT Plant tissue culture
  - (ovary-conditioned medium; generating doubled haploid plants from microspores)
- IT Flower
  - (ovary; generating doubled haploid plants from microspores)
- IT Stress, plant
  - (temp.; generating doubled haploid plants from microspores)
- IT Barley
  - (variety Igri, ovary of; generating doubled haploid plants from microspores)
- IT 56-85-9, Glutamine, biological studies 58-56-0, Pyridoxine hydrochloride 59-67-6, Nicotinic acid, biological studies 67-03-8, Thiamine hydrochloride 87-89-8, Myo inositol 139-33-3 7487-88-9, Magnesium sulfate, biological studies 7631-95-0, Disodium molybdate 7646-79-9, Cobalt chloride (CoCl<sub>2</sub>), biological studies 7681-11-0, Potassium iodide, biological studies 7720-78-7, Ferrous sulfate 7733-02-0, Zinc sulfate 7757-79-1, Nitric acid potassium salt, biological studies 7758-98-7, Sulfuric acid copper(2+) salt (1:1), biological studies 7778-77-0, Potassium dihydrogen phosphate 7785-87-7, Manganese sulfate 10043-35-3, Boric acid (H<sub>3</sub>BO<sub>3</sub>), biological studies 10043-52-4, Calcium chloride, biological studies 10196-04-0, Ammonium sulfite

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(culture medium contg.; generating doubled haploid plants from microspores)

IT 51-35-4, Hydroxyproline 52-67-5, Penicillamine 54-21-7, Sodium salicylate 54-85-3, Isonicotinic hydrazide 56-40-6, Glycine, biological studies 57-71-6 62-56-6, Thiourea, biological studies 65-45-2, Salicyl amide 65-71-4, Thymine 69-72-7, Salicylic acid, biological studies 69-89-6, Xanthine 87-39-8, Violuric acid 88-82-4, 2,3,5-Triiodobenzoic acid 89-00-9, 2,3-Pyridine dicarboxylic acid 89-73-6, Salicyl hydroxamic acid 90-02-8, Salicyl aldehyde, biological studies 93-10-7, Quinaldic acid 94-67-7, Salicyl aldoxime 94-75-7, 2,4-Dichlorophenoxyacetic acid, biological studies 95-14-7, 1H-Benzotriazole 95-45-4, 2,3-Butanedione dioxime 98-98-6, Picolinic acid 100-26-5, 2,5-Pyridine dicarboxylic acid 109-09-1, 2-Chloro pyridine 118-92-3, Anthranilic acid 120-36-5, 2-(2,4-Dichlorophenoxy)propionic acid 133-90-4, Amiben 135-20-6, Cupferron 138-52-3, Salicin 142-08-5, 2-Hydroxypyridine 147-84-2, biological studies 151-01-9, Ethyl xanthic acid 315-30-0, 4-Hydroxypyrazolo[3,4-d]pyrimidine 366-18-7, 2,2'-Dipyridyl 441-38-3, .alpha.-Benzoin oxime 499-80-9, 2,4-Pyridine dicarboxylic acid 499-83-2, 2,6-Pyridinedicarboxylic acid 525-79-1, Kinetin 536-69-6, Fusaric acid 557-01-7, 2-Hydroxypyrimidine 600-32-8, .alpha.,.beta.-Dichlorobutyric acid 607-87-4 609-71-2, 2-Hydroxynicotinic acid 620-24-6, 3-Hydroxy benzyl alcohol 623-12-1, 4-Chloro anisole 874-24-8, 3-Hydroxypicolinic acid 882-09-7, 2-(4-Chlorophenoxy)-2-methylpropionic acid 936-02-7, Salicyl hydrazide 1071-83-6, Glyphosate 1202-34-2, 2,2'-Dipyridylamine 1762-95-4, Ammonium thiocyanate 1829-32-9, 3-Chlorosalicylic acid 1918-02-1 1984-59-4, 2,3-Dichloroanisole 2459-07-6 2942-59-8, 2-Chloronicotinic acid 3167-49-5, 6-Aminonicotinic acid 4998-57-6, Histidine 5006-66-6, 6-Hydroxynicotinic acid 5106-98-9, 4-Chlorosalicylic acid 5326-23-8, 6-Chloronicotinic acid 5345-47-1, 2-Aminonicotinic acid 5348-51-6, 2-Hydroxy-4-methylpyrimidine hydrochloride 5750-76-5, 2,4,5-Trichloropyrimidine 6332-56-5, 2-Hydroxy-3-nitropyridine 13161-30-3, 2-Hydroxy pyridine-N-oxide 16672-87-0, 2-Chloroethylphosphonic acid 16867-04-2, 2,3-Dihydroxypyridine 19340-26-2 19437-26-4, Di-2-pyridyl ketone 20636-41-3 23945-44-0, 2,4-Dihydroxypyrimidine-5-carboxylic acid 23950-58-5, Pronamide 60932-58-3, 1H-Benzotriazolecarboxylic acid  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(generating doubled haploid plants from microspores)

IT 69-79-4, Maltose  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)

(in d.-gradient centrifugation of stressed microspores; generating doubled haploid plants from microspores)

IT 69-65-8, Mannitol  
RL: NUU (Other use, unclassified); USES (Uses)  
(in d.-gradient centrifugation of stressed microspores; generating doubled haploid plants from microspores)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 8 CA COPYRIGHT 2003 ACS  
AN 137:275350 CA  
TI Culture medium for **cell** growth and transfection  
IN Ciccarone, Valentina; Gruber, Dale; Bennett, Shelly  
PA Invitrogen Corporation, USA  
SO PCT Int. Appl., 114 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002077202	A1	20021003	WO 2002-US9183	20020327
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2001-278754P P 20010327

AB The invention concerns **cell** culture media (particularly serum free, non animal derived, and/or chem. defined media) which are useful for introducing macromols. and compds. (e.g., nucleic acid mols.) into **cells** (e.g., eukaryotic **cells**). According to the invention, such introduction can take place in the presence of said medium. **Cells** contg. such introduced materials can then be cultured in the medium and the effect of the introduced materials on the **cells** can be measured or detd. In particular, the invention allows introduction of nucleic acid mols. (e.g., vectors) into **cells** (particularly eukaryotic **cells**) and expression of proteins encoded by the nucleic acid mols. in the **cells**. The invention obviates the need to change the **cell** culture medium each time a different procedure is performed with the **cells** (e.g., culturing **cells** vs. transfecting **cells**). The invention thus provides efficient and high throughput methods to transform/transfect culture and **cells** avoiding the need for multiple manipulations and transfers of **cells** during transfection and expression studies. The invention also relates to compns. and kits useful for culturing and transforming/transfecting **cells**.

ICM C12N001-00

ICS C12N005-00

CC 9-11 (Biochemical Methods)

Section cross-reference(s): 3

ST **cell** culture medium proliferation transfection protein expression

IT Animal **cell** line

(293; culture medium for **cell** growth and transfection)

IT Animal **cell** line

(BHK; culture medium for **cell** growth and transfection)

IT Animal **cell** line

(CHO; culture medium for **cell** growth and transfection)

IT Animal **cell** line

(COS; culture medium for **cell** growth and transfection)

IT Chelating agents

(IRC011; culture medium for **cell** growth and transfection)

IT Animal **cell** line

(PER-C6; culture medium for **cell** growth and transfection)

IT Animal **cell** line

(Sp2/0; culture medium for **cell** growth and transfection)

IT Alcohols, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (amino; culture medium for **cell** growth and transfection)

IT Membrane potential  
 (biol.; culture medium for **cell** growth and transfection)

IT Amphibia  
 Animal **cell**  
 Animal tissue culture  
 Aves  
 Buffers  
 Catalysis  
**Cell** proliferation  
 Culture media  
 Epithelium  
 Eukaryota  
 Fish  
 Genetic vectors  
 Glycolysis  
 HeLa **cell**  
 Insecta  
 Mammalia  
 Osmolarity  
 Plant **cell**  
 Surfactants  
 Transformation, genetic  
 (culture medium for **cell** growth and transfection)

IT Proteins  
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP  
 (Preparation)  
 (culture medium for **cell** growth and transfection)

IT DNA  
 Nucleic acids  
 Peptides, biological studies  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)  
 (culture medium for **cell** growth and transfection)

IT Amines, biological studies  
 Amino acids, biological studies  
 Carbohydrates, biological studies  
 Coenzymes  
 Cycloalkanols  
 Fatty acids, biological studies  
 Flavins  
 Glycosaminoglycans, biological studies  
 Growth factors, animal  
 Hormones, animal, biological studies  
 Lipids, biological studies  
 Nucleotides, biological studies  
 Phospholipids, biological studies  
 Polysaccharides, biological studies  
 Salts, biological studies  
 Trace metals  
 Vitamins  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (culture medium for **cell** growth and transfection)

IT Cations  
 (divalent; culture medium for **cell** growth and transfection)

IT Apparatus  
 (kits; culture medium for **cell** growth and transfection)

IT Carboxylic acids, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)

(polycarboxylic acid esters, culture medium for **cell** growth and transfection)

IT Alcohols, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (polyhydric; culture medium for **cell** growth and transfection)

IT Cations  
 (trivalent; culture medium for **cell** growth and transfection)

IT Carboxylic acids, biological studies  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (.alpha.-hydroxy derivs., culture medium for **cell** growth and transfection)

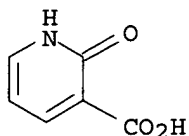
IT 56-87-1D, L-Lysine, reaction product with DOTA 67-43-6, Diethylenetriaminepentaacetic acid 70-51-9, Deferoxamine 82-82-6, 4-Pyridoxic acid 91-18-9D, Pteridine, derivs. 98-98-6, Picolinic acid 101-60-0, Porphine 109-52-4, Valeric acid, biological studies 139-13-9D, Nitrilotriacetic acid, 2,2'-bipyridine derivs. 299-29-6, Ferrous gluconate 463-77-4D, Carbamic acid, polyethylene derivs. 496-63-9, 3-Hydroxy-4-pyrone 546-88-3, Acetohydroxamic acid 609-71-2, 2-Hydroxynicotinic acid 737-86-0 822-89-9, 1-Hydroxypyrid-2-one 1121-23-9, 3-Hydroxypyrid-4-one 1429-50-1 2398-81-4, Nicotinic acid-N-oxide 4940-11-8, Ethyl maltol 7733-02-0, Zinc sulfate 7783-00-8D, Selenious acid, salt 7803-49-8D, Hydroxylamine, derivs. **13161-30-3, 2-Hydroxypyridine-N-oxide** 14836-73-8, Ferrioxamine 15630-64-5, Ferrichrome 16867-04-2, 3-Hydroxypyrid-2-one 19365-01-6, 1-Methyl-3-hydroxypyrid-2-one 27341-45-3D, Hydroxypyridine, derivs. 30652-11-0, 1,2-Dimethyl-3-hydroxypyrid-4-one 60239-18-1D, DOTA, reaction product with lysine 69146-59-4 134020-79-4, Sapphyrin 147219-26-9, Trisuccin 189752-49-6, Texaphyrin 344612-27-7, LIPOFECTAMINE 2000  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (culture medium for **cell** growth and transfection)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> 2-hydroxynicotinic acid/cn  
L306 1 2-HYDROXYNICOTINIC ACID/CN

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L306 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 609-71-2 REGISTRY  
CN 3-Pyridinecarboxylic acid, 1,2-dihydro-2-oxo- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Nicotinic acid, 1,2-dihydro-2-oxo- (6CI, 7CI)  
OTHER NAMES:  
CN 1,2-Dihydro-2-oxo-3-pyridinecarboxylic acid  
CN 1,2-Dihydro-2-oxonicotinic acid  
CN 2-Hydroxy-3-carboxypyridine  
CN **2-Hydroxynicotinic acid**  
CN 2-Hydroxypyridine-3-carboxylic acid  
CN 3-Carboxy-2-pyridone  
FS 3D CONCORD  
MF C6 H5 N O3  
CI COM  
LC STN Files: AGRICOLA, BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,  
CHEMCATS, CHEMLIST, CSChem, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB,  
MEDLINE, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



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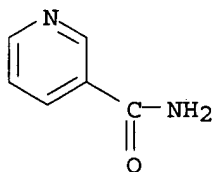
205 REFERENCES IN FILE CA (1962 TO DATE)  
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
206 REFERENCES IN FILE CAPLUS (1962 TO DATE)  
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s nicotinamide/cn  
L307 1 NICOTINAMIDE/CN

=> d

L307 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 98-92-0 REGISTRY  
CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN **Nicotinamide** (8CI)  
OTHER NAMES:  
CN .beta.-Pyridinecarboxamide  
CN 3-(Aminocarbonyl)pyridine  
CN 3-Amidopyridine  
CN 3-Carbamoylpyridine  
CN 3-Pyridinecarboxylic acid amide  
CN Aminicotin  
CN Benicot  
CN Delonin Amide

CN Dipegyl  
 CN m-(Aminocarbonyl)pyridine  
 CN NAM  
 CN Niacinamide  
 CN Niavit PP  
 CN Nicamina  
 CN Nicamindon  
 CN Nicasir  
 CN Nicobion  
 CN Nicofort  
 CN Nicosan 2  
 CN Nicosylamide  
 CN Nicotilamide  
 CN Nicotine acid amide  
 CN Nicotinic acid amide  
 CN Nicotinic amide  
 CN Nicotylamide  
 CN Nicovit  
 CN Nicovitina  
 CN Nictoamide  
 CN Niocinamide  
 CN Niozymin  
 CN Papulex  
 CN Pelmin  
 CN Pelmine  
 CN Pelonin amide  
 CN Vi-Nicotyl  
 CN Vitamin B  
 CN Vitamin B3  
 FS 3D CONCORD  
 DR 123574-63-0, 37321-14-5, 78731-47-2  
 MF C6 H6 N2 O  
 CI COM  
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
 CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM,  
 CSNB, DDFU, DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*,  
 IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,  
 NIOSHTIC, PDLCOM\*, PHAR, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, USAN,  
 USPAT2, USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

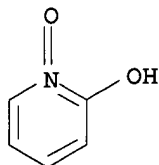
6239 REFERENCES IN FILE CA (1962 TO DATE)  
 265 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 6252 REFERENCES IN FILE CAPLUS (1962 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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=> d 13

L13 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2002 ACS  
RN 13161-30-3 REGISTRY  
CN 2-Pyridinol, 1-oxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-Hydroxypyridine 1-oxide  
CN 2-Hydroxypyridine N-oxide  
FS 3D CONCORD  
MF C5 H5 N O2  
CI COM  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CBNB,  
CHEMCATS, CHEMLIST, CSChem, HODOC\*, IFICDB, IFIPAT, IFIUDb, TOXCENTER,  
TOXLIT, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

55 REFERENCES IN FILE CA (1967 TO DATE)  
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
55 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L6 ANSWER 3 OF 8 CA COPYRIGHT 2003 ACS  
 AN 134:204751 CA  
 TI Metal binding compounds and their use in cell culture medium compositions  
 IN Epstein, David A.; Battista, Paul; Gruber, Dale; Judd, David  
 PA Life Technologies, Inc., USA  
 SO PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001016294	A2	20010308	WO 2000-US23580	20000828
	WO 2001016294	A3	20010907		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1210410	A2	20020605	EP 2000-959504	20000828
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRAI US 1999-151055P P 19990827  
 WO 2000-US23580 W 20000828

AB The present invention is directed generally to metal binding compds. which may be added to cell culture media to replace factors required for cultivation of the cells (e.g. transferrin) which are of animal or human origin. More specifically, the invention is directed to metal binding compds. or complexes thereof comprising one or more transition element cations (such as ferrous or ferric ions), which are added to cell and tissue culture medium compns. The metal binding compds. may be added to the media alone or may be first complexed with a transition metal ion. The invention is also directed to methods of use of such compns., including, for example, methods for the cultivation of eukaryotic cells, particularly animal cells, in vitro. The invention also relates to compns. comprising such culture media and one or more cells, and to kits comprising one or more of the above-described compns. The compns. of the present invention obviate the need for naturally derived metal-binding proteins, such as transferrin and ceruloplasmin, which may contain blood-borne pathogens.

*W. J. Judd*

\* L6 ANSWER 4 OF 8 CA COPYRIGHT 2003 ACS  
AN 133:290309 CA  
TI New insulin-mimetic zinc (II) complexes; bis-maltolato zinc(II) and  
Bis-2-hydroxypyridine-N-oxido zinc(II) with Zn(O4) coordination mode  
AU Yoshikawa, Yutaka; Ueda, Eriko; Kawabe, Kenji; Miyake, Hiroyuki; Sakurai,  
Hiromu; Kojima, Yoshitane  
CS Department of Chemistry, Graduate School of Science, Osaka City  
University, Osaka, 558-8585, Japan  
SO Chemistry Letters (2000), (8), 874-875  
CODEN: CMLTAG; ISSN: 0366-7022  
PB Chemical Society of Japan  
DT Journal  
LA English  
AB Zn(II) complexes with a Zn(O4) coordination mode have insulinomimetic  
activity. A bis-maltolato Zn(II) (Zn(Mal)2) complex was revealed to be in  
an octahedral and a square pyramidal geometries in a unit cell.  
Both Zn(Mal)2 (IC50 = 0.59 mM) and bis-2-hydroxypyridine-N-  
oxide Zn(II) (IC50 = 0.41 mM) complexes exhibited higher  
insulinomimetic activity than VOSO4 (IC50 = 1.00 mM) and ZnSO4 (IC50 = 0.81  
mM) in terms of IC50 values, which show 50% inhibition concn. of the  
complex in the free fatty acids release from rat adipocytes.  
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

*APN*

L305 ANSWER 77 OF 145 MEDLINE  
 AN 91248322 MEDLINE  
 DN 91248322 PubMed ID: 2095129  
 TI **Chelators** affecting iron absorption in mice.  
 AU Kontoghiorghes G J  
 CS Department of Haematology, Royal Free Hospital School of Medicine, London, UK.  
 SO ARZNEIMITTEL-FORSCHUNG, (1990 Dec) 40 (12) 1332-5.  
 Journal code: 0372660. ISSN: 0004-4172.  
 CY GERMANY: Germany, Federal Republic of  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199107  
 ED Entered STN: 19910719  
 Last Updated on STN: 19980206  
 Entered Medline: 19910702  
 AB The effect of natural and synthetic **chelators** on iron (<sup>59</sup>Fe) absorption in mice has been studied in three different experiments using single or repeated intragastric administrations of **chelator** iron (<sup>59</sup>Fe) **complexes** of different **chelator** doses. The amount of <sup>59</sup>Fe in whole animals, their excretions and also distribution of <sup>59</sup>Fe in blood, liver, spleen and heart was measured at one, three and eight weeks following the <sup>59</sup>Fe-**chelator** administrations and compared to controls which received the same amount of iron (<sup>59</sup>Fe) but no **chelator**. 2-Hydroxy-4-methoxypyridine-1-oxide and maltol, which form lipophilic iron **complexes**, were found to cause an increase of <sup>59</sup>Fe absorption while other **chelators** caused a decrease either by precipitating iron eg. 2-**hydroxypyridine-1-oxide** or by forming non absorbable soluble iron **complexes** eg. desferrioxamine, mimosine, EDTA. 1,2-Dimethyl-3-hydroxypyrid-4-one caused a decrease in iron absorption at a high dose (10 mg) by comparison to the control group but it did not significantly alter iron absorption at a lower dose (2 mg). It is suggested that natural and synthetic iron chelating compounds influence the absorption of iron and some may have a use in the treatment of diseases associated with gastro-intestinal iron absorption imbalance.